WHAT IS CLAIMED IS:

1. A heating, ventilation and air conditioning system for use in an automobile, comprising:

a casing having a vent outlet;

a blower chamber accommodating a blower fan discharging air, said blower chamber being disposed within the casing;

a descending air passage communicated with the blower chamber to permit the air from the blower fan to flow downwardly therethrough;

an inner wall cooperating with the casing to form the blower chamber and the descending air passage, said inner wall being formed with a recessed portion located near a boundary between the blower chamber and descending air passage;

a cooling heat-exchanger adapted to cool the air passing therethrough to produce cool air;

an ascending air passage communicated with the descending air passage and the vent outlet to permit the air passing through the descending air passage to flow upwardly therethrough into the vent outlet;

a heating heat-exchanger disposed within the ascending air passage and adapted to heat the air passing therethrough to produce warm air, said cooling heat-exchanger being disposed between the blower chamber and the heating heat-exchanger;

a bypass air passage juxtaposed to the heating heat-exchanger and communicated with the ascending air passage to permit the cool air from the cooling heat-exchanger to bypass the heating heat-exchanger and flow into the ascending air passage;

an air-mix door adapted to control a proportion of the warm air passing through the heating heat-exchanger and the cool air passing through the bypass

air passage; and

a foot vent passage communicated with the ascending air passage;

wherein the heating heat-exchanger is arranged substantially horizontally at the recessed portion of the inner wall and has one end portion adjacent to the recessed portion and an opposite end portion adjacent to the bypass air passage,

wherein the bypass air passage and the vent outlet are substantially linearly aligned with each other via the ascending air passage, and

wherein the foot vent passage is arranged above the heating heat-exchanger and between the blower chamber and the ascending air passage.

2. The system as claimed in claim 1, wherein the cooling heat-exchanger is inclined by a predetermined angle relative to a horizontal plane.

3. The system as claimed in claim 2, wherein the cooling heat-exchanger is inclined in a fore and aft direction of the automobile.

4. The system as claimed in claim 2, wherein the cooling heat-exchanger is inclined in a width direction of the automobile perpendicular to a fore and aft direction thereof.

5. The system as claimed in claim 1, further comprising a partition wall separating the foot vent passage from the ascending air passage, said partition wall comprising an uppermost portion formed with a foot communication opening through which the foot vent passage is communicated with the ascending

air passage.

6. The system as claimed in claim 5, further comprising a warm air passage disposed downstream of the heating heat-exchanger and communicated with the ascending air passage, said warm air passage guiding the air passing through the heating heat-exchanger toward the bypass air passage side of the ascending air passage.

7. The system as claimed in claim 6, wherein the warm air passage is formed by the inner wall and the partition wall.

8. The system as claimed in claim 5, further comprising a mode door disposed within the foot communication opening, said mode door being moveable to open and close the foot communication opening.

9. The system as claimed in claim 1, further comprising a vent door disposed within the vent outlet, said vent door being moveable to open and close the vent outlet.

10. The system as claimed in claim 4, wherein the blower fan is arranged in substantially the same inclined as that of the cooling heat-exchanger.

11. A heating, ventilation and air conditioning system for use in an automobile, comprising:

a casing having a vent outlet;

a blower chamber accommodating a blower fan discharging air, said blower chamber being disposed within the casing;

a first air passage substantially vertically extending within the casing and communicated with the blower chamber to permit the air from the blower fan to flow downwardly therethrough;

a second air passage substantially vertically extending within the casing and communicated with the first air passage to permit the air passing through the first air passage to flow upwardly therethrough into the vent outlet;

a cooling heat-exchanger adapted to cool the air passing therethrough to produce cool air;

a heating heat-exchanger arranged substantially horizontally within the second air passage and in an at least partially overlapping relation to the cooling heat-exchanger in a vertical direction, said heating heat-exchanger being adapted to heat the air passing therethrough to produce warm air, said cooling heat-exchanger being disposed between the blower chamber and the heating heat-exchanger;

a wall cooperating with the casing to define the blower chamber, the first air passage, the second air passage and a recessed portion located near a boundary between the blower chamber and the first air passage and adjacent to the heating heat-exchanger;

a bypass air passage arranged in substantially linear alignment with the vent outlet via the second air passage in the vertical direction, said bypass air passage being juxtaposed to the heating heat-exchanger in a fore and aft direction of the automobile and communicated with the second air passage to permit the cool air from the cooling heat-exchanger to bypass the heating heat-exchanger and flow into the second air passage; and

a foot vent passage arranged above the heating

heat-exchanger and between the blower chamber and the second air passage, said foot vent passage being communicated with the second air passage.

12. The system as claimed in claim 11, wherein the wall comprises an inner wall bent near the boundary between the blower chamber and the first air passage to form the recessed portion, said recessed portion being disposed adjacent to one end portion of the heating heat-exchanger, an opposite end portion of which is disposed adjacent to the bypass air passage.

13. The system as claimed in claim 11, wherein the cooling heat-exchanger is inclined by a predetermined angle relative to a horizontal plane.

14. The system as claimed in claim 13, wherein the cooling heat-exchanger is inclined by a predetermined angle relative to a horizontal plane in the fore and aft direction of the automobile.

15. The system as claimed in claim 13, wherein the cooling heat-exchanger is inclined in a width direction of the automobile perpendicular to the fore and aft direction thereof.

16. The system as claimed in claim 11, wherein the wall comprises a partition wall separating the foot vent passage from the second air passage, said partition wall comprising an uppermost portion formed with a foot communication opening communicating the foot vent passage with the second air passage.

17. The system as claimed in claim 16, further

comprising a warm air passage disposed downstream of the heating heat-exchanger and communicated with the second air passage, said warm air passage guiding the air passing through the heating heat-exchanger toward the bypass air passage side of the second air passage, said warm air passage being formed by the inner wall and the partition wall.

18. The system as claimed in claim 11, further comprising an air-mix door adapted to control a proportion of the air passing through the heating heat-exchanger and the air passing through the bypass air passage.

19. The system as claimed in claim 16, further comprising a mode door disposed within the foot communication opening, said mode door being moveable to open and close the foot communication opening.

20. The system as claimed in claim 11, further comprising a vent door disposed within the vent outlet, said vent door being moveable to open and close the vent outlet.

21. The system as claimed in claim 15, wherein the blower fan is arranged in substantially the same inclined state as that of the cooling heat-exchanger.